

**ABSTRACT**

A transcoder is described for converting a received first digital signal with a first modulation and encoding scheme to a second digital signal with a second modulation and encoding scheme. The transcoder may include a demodulator that produces a demodulated digital stream of data from the received first digital signal and a modulator in signal communication with the demodulator, where the modulator modulates the digital stream of data with the second modulation and encoding scheme. Additionally, the transcoder may include an upconverter in signal communication with the modulator, where the upconverter produces the second digital signal.